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Civil Engineering

STANDARD FACILITY REQUIREMENTS



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This handbook contains guidelines and information for facility requirements in support of Air Force Reserve Command missions. The criteria in this handbook represent standard space allowances authorized. These guidelines apply to key personnel in AFRC civil engineering, and to key personnel in other AFRC organizations who allocate space in existing facilities or develop or approve facility requirements. The use of existing facilities will conform to criteria contained within this handbook as nearly as possible; however, the physical configuration of the existing structures may require variances from these guidelines. Criteria for items not addressed in this handbook can be found in AFH 32-1084, *Facility Requirements*.

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This document is substantially revised and must be completely reviewed.

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Chapter 1

OVERVIEW

1.1. Purpose. The guidelines in this handbook are applicable to the Air Force Reserve Command (AFRC) and implement DOD construction criteria directives.

1.2. Requirements and Criteria Development:

1.2.1. The criteria in this handbook are the space allowances authorized within AFRC. Actual space requirements for each facility (existing or to be constructed) are programmed and justified on the basis of the authorized unit strength and the quantity and type of equipment and supplies. The use of existing facilities should conform to the criteria as nearly as possible; however, it is recognized that physical characteristics of existing structures will, in some cases, restrict adherence. Although the facility space standards contained herein are expected to adequately accommodate the majority of AFRC units, we recognize that due to the highly diversified and, in some cases unique, structure of AFRC operations a single facility standard will not accommodate every need. Exceptions to facility space criteria will be considered when specific unit functions are not addressed within the established standards. Waivers to facility space criteria will be considered when unique and compelling circumstances exist that cause the standards established herein to be inadequate for a specific location.

1.2.1.1. All requests for facility space exceptions and waivers shall be forwarded in writing to HQ AFRC/CEPR for staffing and coordination.

1.2.1.2. All requests for facility space exceptions and waivers shall be reviewed by a panel consisting of members from HQ AFRC/CEPR, a HQ AFRC organizational representative from the function generating the request, and a HQ AFRC command facility panel member. Requests for waivers and exceptions shall be reviewed in a timely fashion and a written reply provided back to the generating unit.

1.2.2. All facility space requirements are given in terms of net area, unless noted otherwise. Gross area can be computed by use of noted factors (in general 30%) and includes the entire facility to the outside enclosure walls.

1.2.3. The space allowances for communications closets and electrical closets are intended for planning purposes and are not to be taken as design criteria.

1.2.4. Where possible, administrative space shall be open with systems furniture use. Joint use space shall have only the minimum essential number of offices constructed and provide maximum flexibility for changes in office use. Where possible, offices shall be joint use and the number and size of exclusive offices kept to a minimum.

1.2.5. When more than one activity occupies a single facility, proportion overhead space (mechanical rooms, halls, etc.) appropriately.

1.2.6. For the purposes of this handbook, Northern Tier installations are defined as those with 30 or more days per year of minus 12 ° C (10° F) or lower or with an average January temperature of minus 7° C (20° F) or lower as determined from two 10-year (or longer) weather data bases.

1.2.7. Program joint use projects to the maximum extent practicable where the ANG, Active Force, and Air Force Reserve Command (AFRC) are collocated. Consider facilities such as medical training,

dormitories, dining halls, bulk fuel storage, vehicle maintenance, communications centers, small arms ranges, fire stations, munitions/ pyrotechnics storage facilities, etc., for joint use.

1.2.8. Each of the tables represent suggested, but not required, space allocations for specific functions. Although it is recognized that local variations in unit manning, facility configurations, and customer needs will result in diverse arrangements of internal space, total (gross) authorizations for facilities should not be exceeded.

Chapter 2

BASE OPERATING SUPPORT

2.1. Base Operating Support (BOS) functions include those activities that, while necessary to provide a fully functional installation, are not directly in support of the base primary mission. BOS functions are managed by the unit Mission Support Group Commander and associated staff.

2.2. Base Operating Support (BOS) – Wing Functions: The requirements for the BOS functions listed below can be found in Paragraph 7.7.

- 2.2.1. Financial Management (Budget Office).
- 2.2.2. Civilian Personnel.
- 2.2.3. Military Personnel Flight.
- 2.2.4. Contracting.
- 2.2.5. Military Equal Opportunity.
- 2.2.6. Public Affairs.
- 2.2.7. Judge Advocate.
- 2.2.8. Chaplain.
- 2.2.9. Safety.

2.3. Base Operating Support (BOS) - AFRC Host Base Functions. The requirements for the BOS functions listed in paragraph 2.3. through paragraph 2.9. are indicated here for convenience even though some may have separate category codes.

2.4. Security Forces Squadron at AFRC Bases.

2.4.1. **Security Forces Control and Identification (Gate House).** Reference Air Force Installation Entry Control Facilities Design Guide for design criteria.

2.4.2. **Security Forces Operations.** This facility is the command center for the direction of security, police services (law enforcement), crime prevention, training, information/personnel/industrial security, force protection, and resource protection operations. It is also the site for the SF control center (Central Security Control/Law Enforcement Desk), armory, and unit mobility/supply. Space authorization for this facility is determined by unit manning and number of assigned UTCs. Large units are authorized a total of 16,590 square feet (gross) for all administrative, training, storage, and functional work space. Small units are authorized a total of 4,200 square feet (gross) for these functions. All other units are authorized a total of 13,530 square feet (gross). Offices in the facility include the Chief of Security Forces (CSF), Chief of Operations Flight, Security Forces Manager, and other support sections. Authorization for unit specific mobility storage and weapons vaults may be determined on a case-by-case basis. Table 2.1. shows proposed space allocation for a Security Forces Squadron (SFS).

Table 2.1. Security Forces Squadron.

DESCRIPTION	SCOPE (SF)	SCOPE (SF)	SCOPE (SF)
	Large Unit (note 1)	Medium Unit (note 2)	Small Unit (note 3)
Chief, Security Forces/Commander (CSF/CC)	140	140	140
CSF/CC (TR)	120	120	N/A
Conference Room	200	200	N/A
First Sergeant	100	100	N/A
Orderly Room/Administration (200 SF + 85 SF/Auth TR)	285	285	N/A
Security Forces Manager (SFM)	100	100	N/A
Quality Control NCO (100 SF + 85 SF/Auth TR + 100 SF for QC Test Area)	285	285	N/A
Chief, SF Administration (SFA)	120	120	120
Information/Personnel/Industrial Security	100	100	100
Pass & Registration/Waiting Area	200	200	200
Chief, Operations Flight (SFO)	120	120	120
Superintendent, Operations Flight	100	100	N/A
SFO Support Staff (85 SF/Auth Pos)	680	85	N/A
Shift Supervisor/Flight Chief/Leader (3 x 85 SF)	255	255	255
Squad Leader (3 x 85 SF)	255	255	N/A
Fire Team Leader (3 x 85 SF)	255	255	N/A
SF Control Center/Battle Staff Room	600	600	600
Evidence Storage Room	50	50	N/A
Lost & Found Property Room	50	50	N/A
Report Writing Room (2 @ 50 SF)	100	100	100
Interrogation/Interview Room (note 4)	100	100	N/A
Chief, Training & Resources Flight (SFT)	100	100	100
Superintendent, SFT	100	N/A	N/A
Training Instructor	85	85	N/A
Instructor Support (85 SF/Auth Pos)	85	85	N/A
Classroom (Partitioned) (note 5)	1,295	1,140	440
Unit Learning Center (ULC)	150	150	100
Unit Career Advisor/Safety/Historian/DP	85	85	N/A
SF Resources (SFTT)	100	100	N/A
SF Resources Support (85 SF/Auth Pos)	340	340	N/A
Armory (note 6)			
Weapons Cleaning Area	100	100	100
Mobility Storage/Pallets/Build-up (note 7)	4900	3500	N/A
Home Station Equipment Storage	250	200	150
Break Room	200	200	100
Men's Locker Room/Shower	350	300	200
Women's Locker Room/Shower	150	150	150
Communications/Electric	250	250	250
Subtotal (net)	12,760	10,410	3,230
Overhead (30%)	3,830	3,120	970
TOTAL (gross)	16,590	13,530	4,200

NOTES:

1. Large Units: 439/452/482 SFS
2. Medium Units: 94/434/440/910/911/913/914/934 SFS
3. Small Units: 301/926 SPTG/SF
4. Includes one-way glass room
5. Actual SF may vary depending on unit requirement. See AFH 32-1084, Table 6.1. for additional guidance.
6. Calculating storage requirements will involve several factors unique to each individual installation. These factors include: number/type of SFS unit daily weapons, munitions and equipment; i.e., radios, night vision equipment and other essential equipment. Also included in the calculation are any other weapons stored in the armory, to include: tenant, mobility, privately owned, aircrew, honor guard, etc.
7. Actual SF may vary depending on the number of unit equipped UTCs. Calculation is based on 700 square feet per authorized unit equipped UTC.

2.4.3. Visitors Control Center. If constructed as a separate facility, each installation is authorized no more than 3,050 square feet (gross) for a visitors center. This authorization includes space for Pass and ID, restrooms, and a media relations room (large conference room). **Table 2.2.** shows proposed space allocation for a Visitors Control Center (VCC). Additional functions may be added to this facility (such as recruiters offices) as desired by the installation commander. Do not duplicate functional space present in the VCC (i.e. Pass and ID, recruiters, etc.) elsewhere on the installation.

Table 2.2. Visitors Control Center.

DESCRIPTION	SCOPE (SF)
Pass and ID	340
Waiting Area	300
Restrooms	350
Media Center (conference room))	900
SF Storage	150
Break Area	200
Com munications/Electrical	100
Subtotal (net)	2,340
Overhead (30%)	710
Total (gross)	3,050

2.5. Logistics Readiness Squadron - Vehicle Operations Element: AFRC units with an assigned Vehicle Operations and Maintenance function are authorized a total of 2,340 square feet (gross) for the Vehicle Operations Administration function. This allowance includes space for all administrative, supervisory, and training activities associated with the Vehicle Operations function at AFRC installations. **Table 2.3.** shows proposed space allocation for a base vehicle operations administration function.

Table 2.3. Vehicle Operations Administration.

DESCRIPTION	SCOPE (SF)
Transportation Officer	120
Maintenance Supervisor (1 @ 85, 1 @ 50)	135
Maintenance Control (2 @ 85, 6 @ 50)	470
Administration Area	100
Break Room	200
Conference/Classroom	400
Vehicle Operations	320
Communications/Electrical	50
Subtotal (net)	1,800
Overhead (30%)	540
Total (gross)	2,340

2.6. Vehicle Maintenance: AFRC units with an assigned Vehicle Operations and Maintenance function are authorized a total of 16,130 square feet (gross) for the Vehicle Maintenance function. This allowance includes space for all maintenance and tool/equipment storage activities associated with the Vehicle Maintenance function. Typical vehicle maintenance facilities will contain no more than nine vehicle maintenance bays with at least two bays able to accommodate the largest vehicle assigned to the unit. At least a single bay must have a door opening width of 17 feet (based on 60K loader maintenance requirement). Floor drains associated with this facility will be connected to oil/water separators or waste water recovery/recycling systems. [Table 2.4.](#) shows proposed space allocation for a base vehicle maintenance shop facility. Vehicle Operations Administration and Vehicle Maintenance Shop should be constructed together in one facility.

Table 2.4. Vehicle Maintenance Shop.

DESCRIPTION	SCOPE (SF)
Inspector's Office (1 @ 85, 1 @ 50)	135
Library/Tech Manual	100
Dynamometer Bay	1,020
Alignment	540
Battery	145
Wheel and Tire	700
Tool Crib	375
Material Control/Bench Stock	300
Machine Shop	800
Maintenance Lift Bays (4 @ 510)	2,040
General Purpose Maintenance Bays (4 @ 510)	2,040
Wash rack	600
Drive Through Corridor	3,250
Communications/Electrical	360
Subtotal (net)	12,410
Overhead (30%)	3,720
Total (gross)	16,130

2.6.1. Refueler Vehicle Maintenance: See Section 8.7

2.6.2. Enclosed Vehicle Parking (Northern Tier): Installations meeting the definition of northern tier locations are authorized 6,000 square feet (gross) of heated vehicle storage space and an additional 6,000 square feet (gross) of unheated vehicle storage space. This space is typically used for storage of high value and special purpose vehicles.

2.7. Contractor Operations: At AFRC installation that have contractor operated BOS functions, the contractor personnel should be provided administrative and functional work space equivalent to the lesser of either a) existing space for that function at the installation or b) the space authorize for their function in this handbook. BOS contractor project management and administrative staff are authorized no more than 400 square feet for office functions and file storage.

2.8. Base Civil Engineer Administration and Maintenance Facility: This facility provides shop and administrative space necessary to support all host base maintenance functions performed by the base civil engineer as well as administrative and training space for assigned personnel. A total of 28,340 square feet (gross) is authorized for this function and includes all associated shop and storage space. [Table 2.5.](#) shows proposed space allocation for a Base Civil Engineering facility. Additional space may be provided for additional activities (i.e. pavements and ground facility, (category code 219-943, etc.) where fully justified, using active force criteria. Space authorization for mobility tasked Civil Engineering Squadrons is addressed in section [7.5](#).

Table 2.5. Base Civil Engineering.

DESCRIPTION	SCOPE (SF)
ADMINISTRATION	
- Base Civil Engineer	140
- Industrial Engineer	85
- LAN/Systems Administrator	270
- Environmental (Ch 100, 5 @ 85, 70 storage)	595
- Engineering (Ch 100, 12 @ 85, 70 storage)	1,190
- Financial Management (3 @ 85, 60 storage)	315
- Real Estate (1 @ 85, 60 storage)	145
- Training Storage	60
- Drafting/CADD (2 @ 90)	180
- Reproduction/Plans Storage	400
- Break Room	300
- Conference Room	540
Subtotal (net)	4,220
OPERATIONS AND MAINTENANCE	
- Operations Chief	120
- Production Control (1 @ 85, 215 storage)	300
- Material Control (1 @ 85, 35 storage)	120
- Operations Chief	140
- Planning (2 @ 85)	170
Subtotal (net)	850

DESCRIPTION	SCOPE (SF)
WORK AREA and SHOP (See Note 1, 2):	
- Pest Management	2,000
- Roads and Grounds	2,800
- Refrigeration, HVAC, Liquid Fuels	1,300
- Sheet Metal	1,200
- Plumbing	500
- Welding Shop	500
- Paint	900
- Carpentry Shop	1,900
- Key Shop	120
- Sign Shop	360
- Power Production, Electric	1,100
Subtotal (net)	12,680
STORAGE (See Note 2):	
- Warehouse	3,000
- Paint Storage	120
- Janitorial Supplies	300
Subtotal (net)	3,420
- Communications/electrical	630
SUBTOTAL (net)	21,800
Overhead (30%)	6,540
TOTAL(gross)	28,340

NOTES:

1. Includes space for four superintendents.
2. Individual shops and storage spaces utilized space saver equipment.

2.8.1. Base Engineer Storage Shed. This facility provides covered storage for items of equipment and supplies needed for installation operations and maintenance which do not require regular warehouse storage. A scope of 2,000 square feet is authorized for AFRC host base civil engineer organizations.

2.9. Logistics Readiness Squadron – Distribution Element. This element of the Logistics Readiness Squadron operates the packing, crating, and traffic management office (TMO) functions at Host and Tenant base locations. A total of 5,360 square feet (gross) is authorized for this function and includes all associated shop and administrative space. **Table 2.6.** shows proposed space allocation for the distribution element. Function space is typically located within the main base warehouse facility.

Table 2.6. Logistics Readiness Squadron – Distribution Element.

DESCRIPTION	SCOPE (SF)
Distribution Operations	750
Packing and Crating	2,600
TMO Administration	550
Communications/electrical	120
Subtotal (net)	4,120
Overhead (30%)	1,240
Total (gross)	5,360

Chapter 3

CATEGORY GROUP 11, AIRFIELD PAVEMENTS

3.1. General Criteria. Requirements for items in this group for AFRC units are determined in the same manner as for active units when located at Air Force installations. Adherence to these requirements at other locations may not always be possible due to multiplicity of situations under which AFRC operates. Federal Aviation Administration (FAA) airfield criteria are normally used for construction of runways, taxiways and associated work located on civil airports. Use naval airfield criteria for construction of airfield facilities located at Naval Air Stations.

3.2. Civil Airport Criteria. The criteria are detailed in AFH 32-1084.

3.3. Basic Item 111-111, Runway. Use active force criteria for runway length and other design elements. Standard runway width is 150 feet. Determine minimum runway width and lengths by operating function based on type of aircraft, weather conditions, and mission requirements.

3.4. Basic Item 111-115, Paved Overrun. Use AFH 32-1084 criteria.

3.5. Basic Item 112-211, Taxiway. Use active force criteria (UFC 3-260-1). A taxiway width of 15.2 m (50 ft) and 22.9 m (75 ft) are standard for class A and B runways respectively. Taxiways supporting towing operation will adhere to the following: Taxiway width will be in accordance with outside gear width of design aircraft plus 3.05 m (10 ft) or 15.2 m (50 ft) total width, whichever is less

3.6. Basic Item 113-321, Apron. Follow active force criteria. Omit apron space for transient aircraft unless an exception is approved by HQ AFRC.

Chapter 4

CATEGORY GROUP 12, PETROLEUM DISPENSING AND OPERATING FACILITIES

4.1. Basic Item 121-111, Petroleum Operations Building. A petroleum operations building is required to provide a centralized facility for administering all base functions related to the receipt, storage, and issue of petroleum products and, when required, liquid oxygen and nitrogen (LOX and LIN). A total of 2,290 square feet is authorized for this facility. This allowance includes space for all management, administration, laboratory, and functional work space associated with the Logistics Readiness Squadron Fuels Management Element. Only one Petroleum Operations facility is authorized per installation. **Table 4.1.** shows proposed space allocation for a base Petroleum Operations Building.

Table 4.1. Petroleum Operations Building.

DESCRIPTION	SCOPE (SF)
Vehicle Checkpoint Building (Detached)	100
Lab	250
Ready Room/Classroom	550
Dispatch/Control	150
Administration	250
Locker/Latrine/Shower	300
FMO Office	100
Communications/Electrical	60
Subtotal (net)	1,760
Overhead (30%)	530
TOTAL (gross)	2,290

4.2. Basic Item 121-122, Hydrant Refueling System. Hydrant refueling systems are required to support aircraft that carry over 20,000 gallons of fuel. Where hydrant systems are justified, provide a fueling position for the total number of primary assigned aircraft (PAA) minus two.

4.3. Basic Item 123-335, Vehicle Fueling System. Provide two dual outlet dispensing pedestals for ground fuels for each increment of 150 motor vehicles to be served. Provide at least one pedestal for mogas and another for diesel. Provide storage in above ground tanks.

4.4. Basic Item 124-135, Jet Fuel Operating Storage. Provide combined storage requirements for both operating and bulk storage based on the requirements of the assigned weapon system per **Table 4.2.** Combined operating and bulk storage not to exceed the following quantities:

Table 4.2. Jet Fuel Storage Maximum Capacity.

AIRCRAFT	QUANTITY (BL)
Fighter	5,000
C-130	5,000
C-141/KC-135/C-5/C-17	20,000

NOTE: Additional storage may be justified based on PAA, tenant support, and contingency requirements for the installation. Provide a minimum of two cone roof storage tanks.

Chapter 5

CATEGORY GROUP 13, COMMUNICATION, NAVIGATIONAL AIDS, AIR TRAFFIC CONTROL, AND AIRFIELD LIGHTING

5.1. General Criteria. At AFRC owned locations, AFRC is responsible for air traffic control, air navigation facilities, Meteorological and Navigational Aids (METNAV) facilities and equipment, and airfield lighting. At joint use facilities, AFRC is responsible for these functions and facilities as per the Joint Use Agreement. AFRC responsibility will include, but is not limited to financial responsibility for operating and/or maintaining permanently installed NAVAID systems such as control towers, radar facilities, ground controlled approach (GCA), radar approach control (RAPCON), instrument landing system (ILS), VHF omnidirectional range (VOR), tactical navigational aid (TACAN), airport surveillance radar (ASR), and precision approach radar (PAR) navigational aids. All facilities will meet standard requirements established in AFH 32-1084.

5.2. Special Criteria. Installation of ground-based aids to air traffic control, air navigation facilities, and airfield lighting at civil airports is normally accomplished by the FAA and airport authority. The FAA has the responsibility for, and normally programs for, these facilities.

5.3. Basic Item 131-111, Communications and Information Facility. This host base facility provides centrally located communications and information systems, both for intra-base and off-base communications. This facility normally includes a switchboard room, frame room, administration, radio maintenance and communication/crypto centers for base communications, information system flight, mission systems flight, communications plans and programming flight, and automated data processing (ADP)/network control center (NCC). A total of 11,840 square feet (gross) is authorized for all administrative, training, and operations functions. **Table 5.1.** shows proposed space allocation for a base communications facility.

Table 5.1. Base Communications Facility.

DESCRIPTION	SCOPE (SF)
Collocated Computer Room (ADP)/Network Control Center (NCC)	1,600
Classified Destruction	48
Communications Security Vault	400
Tape Library	140
Message Distribution Center	200
Communications and Information Manager/ Commander	150
Information Systems Flight Chief	120
Mission Systems Flight Chief	120
Plans and Programs Flight Chief	120
Base Radio Operations	200
Training	400
Administration	300
Base Telephone Switchboard	180
Comm - Computer Radio Maintenance	400
Comm - Computer Telephone Maintenance	400

DESCRIPTION	SCOPE (SF)
Comm - Computer Maintenance Equipment Storage	150
Comm - Computer PC Maintenance	200
Storage & Supply Room	150
Production Control & Traffic Analysis (ADP)	180
Break Area	200
Comm - Audio Visual Maintenance	120
Base Test Facility	250
Switchboard Operator	144
ATCALS Maintenance	400
IM Personnel	700
Mail Room	360
Records Center Storage	200
Electronic Pubs/Forms/FOIA Reading Room	200
Reprographics Center	400
Graphics	180
Base Photo	220
Communications/Electrical	280
Subtotal (net)	9,110
Overhead (30%)	2,730
TOTAL (gross)	11,840

5.3.1. Information Systems Flight: When the AFRC Wing is located on an Active Duty installation (tenant location) the Information Systems Flight provides communication and information systems support to the Reserve Wing. This function (typically located within the Wing Headquarters facility) is authorized a total of 1,000 square feet (net) for all management, administrative, training, storage, and functional work space (including mail distribution and message centers).

Chapter 6

CATEGORY GROUP 14, LAND AND OPERATIONAL FACILITIES

6.1. Basic Item 141-453, Base Airfield Operations Management. This facility provides space for numerous functions necessary for daily airfield operations and should be located near the main aircraft parking areas and runways. Airfield management function requires space for the airfield manager and administrative support staff, flight planning, flight plan filing, airfield condition chart, pilot briefing, air crew lounge, supplies, map and chart storage, and communications and tool storage. A distinguished visitors lounge and snack bar may be included if not otherwise available near the Base Operations facility. Airfield Management/Base Operations facilities at Joint Air Reserve Bases use active duty requirements in AFH 32-1084. Airfield Management/Base Operations facilities at Joint Air Reserve Stations are authorized a total of 2,000 square feet (net) for all included functions. There will be only one host operated base operations facility unless special circumstances exist.

6.1.1. Weather Section. The weather section of base operations includes space for two functions:

6.1.1.1. Forecasting: This function requires a forecaster work area; space for required New Tactical Forecast System (NTFS), which includes Communications/Data management and one to two Base Weather Station Terminals; Weather Radar (WSR88D) Open Primary User Processor Terminal (OPUP); desktop computers for receipt and display of satellite and radar data; aircrew briefing area, and office space for the weather supervisor. A total of 900 square feet (gross) is authorized for this function.

6.1.1.2. Observing site: If base operations is more than 3.2 km (2 miles) from the airport reference point or cannot provide unrestricted visibility, a Surface Weather Observing Facility, category code 141-629, may be authorized. The observing facility site should allow unrestricted visibility of all quadrants of the airfield, meteorological instrument displays, weather data recording and storage, transmitting devices to NTFS Observer Terminal, equipment maintenance and supply storage.

6.1.1.2.1. At airfields that do not require continuous weather observations, the observing site is normally located in Base Operations, or in another existing building designated as Surface Weather Observing Facility. In both locations, windows must face the runway complex, and the observer must have direct access to a point that provides a view of the runway and approach zones. The observing point or platform and its access should have appropriate safety features. Base operations sites incorporated with the base weather station are the most cost-effective. A total of 300 square feet (gross) is authorized for this function.

6.1.1.3. Air Traffic Control Facility. This facility is necessary for safe and efficient conduct of flight operations. Use the Design Guide for Air Traffic Control Towers/ RAPCON (HQ AFCEE/DGA) and HQ AFFSA design requirements in accordance with AFI 32-1084.

6.2. Command Post: Each installation is authorized a single USAF Command Post (category code 141-461) facility. The Command Post is authorized a total of 4,500 square feet (gross) for all administrative, storage, and operational requirements. Command Posts for SIOP tasked units are authorized an additional 750 square feet (gross) for classroom, communications and security requirements. **Table 6.1.** shows proposed space allocation for a Command Post Facility. See notes accompanying Table for additional design criteria associated with Command Post facilities.

Table 6.1. Command Post.

DESCRIPTION	SCOPE (SF)	SCOPE (SF) (SIOP)
Officer In Charge (note 2)	120	120
Senior ART/Operational Reports	120	120
Superintendent	120	120
NCOIC, SORTS and Training	120	120
Training Cab/SRC (note 3)	400	400
Communications/Electrical closet	60	200
Console/Emergency Action Cell (note 4)	600	600
Battle Staff/CAT (note 5)	900	900
Support Battle Staff	400	400
Latrine/Shower	300	300
Administrative Support	120	120
Classroom (SIOP)		400
Entrapment Area (SIOP)		40
Kitchen/Break Area	200	200
Subtotal (net)	3,460	4,040
Overhead (30%)	1,040	1,210
TOTAL (gross)	4,500	5,250

NOTES:

1. The working area for a CP is based upon the functions to be performed and on the maximum number of persons required to perform those functions during anticipated peak workloads.
2. An area should be reserved for the Chief, Superintendent, and the administrative staff with adequate office space to accommodate the number of personnel and any equipment necessary to perform their day-to-day duties. Privacy and immediate access to the console area are key considerations for the administrative area.
3. The training section should have easy access to the console area to facilitate training and testing of C2 personnel.
4. Special attention should be made to ensure the Emergency Action (EA) controllers are provided a secure area to execute EA procedures. Emergency Action Message (EAM) formats may only be viewed by certified command post controllers, controller trainees, and the Crisis Action Team Director. A means of restricting visibility by other personnel in the BS/BS Support and CP must be in place and used during EAM processing. If unit missions dictate that Top Secret discussion between controllers must take place, then a workable method must be in place to ensure that personnel without both a need to know and the proper clearance are restricted from hearing these conversations. Collocated command posts occupied by personnel with differing levels of clearances must ensure provisions are made to ensure protection of the classified material or equipment.
5. Crisis Action Team (CAT) Area. To ensure a good cross flow of information, a collocated CAT area is highly desired. If not possible, secure communications must exist between the CP and the

CAT to ensure effective coordination. The CAT area should be sized to accommodate the CAT and all associated equipment requirements, but is at the discretion of the unit commander.

6. Wall and ceiling silencing materials or other means of noise reduction will be used in CP's to reduce noise level to a minimum. Raised flooring will be used to facilitate the addition of future communications systems.
7. All Command Posts must have a non-interruptible power supply. All facilities will be equipped with emergency lighting.
8. The facility that contains the CP must be designated as a USAF Restricted Area at the protection level equal to the highest protection level resources they support operationally. Entry control to the CP, associated equipment/communications rooms, and emergency generators are outlined in AFI 31-101, *The Air Force Installation Security Program*, as supplemented.
9. C2 Facility Remodeling: Prior to construction, C2 managers will coordinate design/plans with the local Security Forces' Information Security and Physical Security sections, local Communications Squadrons EMSEC personnel and HQ AFRC/DOCR to ensure compliance with guidelines.

6.3. Basic Item 141-459, Crew Readiness (Aircraft Alert Facility). Units that require crew readiness facilities to meet primary mission requirements will use criteria established in AFH 32-1084. Dedicated facilities are not authorized for installations that have secondary mission statements requiring aircraft alert training. At these locations, temporary aircraft alert operations will be established in existing facility space as required to meet mission training and exercise requirements.

6.4. Basic Item 141-753, Squadron Operations. Each flying squadron requires a facility for planning, briefing, administration, storage, and critique of combat crews. Functions within this facility include weapons and tactics, intelligence, briefing/debriefing, standardization and evaluation, flight planning, flying safety, flight records, physical training, scheduling, general training, and space for unit administration. Space is provided for storage of air crew chemical warfare ensemble in the personal equipment area. Additional functions including, but not limited to, Life Support, Base Operations, Operations Support Squadron, Operations Group Command, and Wing Command Post may also be located in the Squadron Operations facility. Space authorizations for these additional functions are established separately within this handbook.

6.4.1. Squadron Operations Facility. Space authorization for the Squadron Operations facility is dependent on the type and number of weapons systems operated by the flying squadron. The following authorizations, shown in **Table 6.2.** (gross square footages), are established based on a standard 8 PAA squadron (15 PAA for fighter squadrons).

Table 6.2. Squadron Operations Facility Sized by Weapon System.

	PRIMARY	ADDITIONAL
	SQUADRON	SQUADRON
WEAPONS SYSTEM	SCOPE (SF)	SCOPE (SF)
C 130	15,850	9,100
HC/MC 130	21,400	13,150
WC 130	14,900	8,550
C 5/C 17	17,050	9,750
KC 135	15,459	5,820
Fighter (F 16/A 10)	15,700	N/A
HH 60	14,500	N/A
Associate Airlift	14,050	8,550
Associate Tanker	12,500	5,750

Space authorizations for unique weapons systems or mission configurations will be determined on a case-by-case basis. **Table 6.3.** (airlift) and **Table 6.4.** (fighter) show proposed space allocation for a Squadron Operations facility. Modifications to these proposals will be necessary to accommodate unique functions associated with individual weapons systems, but should be accomplished within the limits of the total authorized facility space allocation established above. Intelligence functions located within Squadron Operations facilities require secure work and storage areas.

Table 6.3. Squadron Operations Facility – Airlift/Tanker.

Description	SCOPE (SF)
Commander	140
First Sergeant	120
Executive Officer	120
Ops Officer (O&T)	120
Squadron Administration	140
Aircrew Briefing	1,000
Conference	240
Orderly Room	400
CAT Room	300
Intelligence (Note 1)	
ART offices (2 @ 120)	240
OIC Office	120
Storage	100
Classroom/reservists work area	600
Records/Data Management	120
Scheduling/Current Ops	200
Safety	120
Mission Planning	700
Tactics	250
Standards/Evaluation	300
Training	200

Description	SCOPE (SF)
Testing	150
Operational Plans	200
Chief Engineer	100
Flight Engineering work room	300
Chief Loadmaster	100
Loadmasters work room	300
Chief Navigator	100
Navigators work room	300
Chief Pilot	100
Pilots work room	300
Mobility Storage	400
Chemical Training Ensemble Storage (Note 2)	400
Aircrew Lounge	400
Computer Room/Training Rooms	800
Quality	400
Crew Briefing	300
Locker Room/Shower	1,300
Fitness/Ergo Room	400
Communications/electrical	310
Subtotal (net)	12,190
30% Overhead	3,660
TOTAL (gross)	15,850

NOTES:

1. Intelligence function office and work area must be secure either at the collateral or compartmentalized level as require by squadron mission.
2. This is an estimate only. Design to requirements based on actual number of ensembles. Estimate 3 SF per ensemble.

Table 6.4. Squadron Operations – Fighters.

DESCRIPTION	SCOPE (SF)
Squadron Commander	140
First Sergeant	120
Administration	120
Orderly Room	400
Flight Commanders Office (4@ 90)	360
Aircrew Briefing	1,300
Mission Planning	600
Flight Management (Ops Office)	550
Chief Ops Plans	120
Operations/Plans Staff	550

DESCRIPTION	SCOPE (SF)
Intelligence (note)	
Intel Office	400
SIPRNET Area	300
MPC	600
M&C	100
Briefing Room	200
Study/Library	200
Ops Training	700
Standard/Evaluation	300
Flight Briefing Rooms (5)	700
Quality	400
Operations Officer	140
EWO	100
Testing Room	100
Simulator Training (MTT)	400
Weapons and Tactics	300
Aircrew Lounge	500
Storage (Mobility)	400
Physical Fitness Room	600
Men's Latrine/Shower/Lockers	700
Women's Latrine/Shower/Lockers	300
Communications/Electrical	380
Subtotal (net)	12,080
Overhead (30%)	3,620
Total (gross)	15,700

NOTE: Intelligence function office and work area must be secure either at the collateral or compartmentalized level as require by squadron mission.

6.4.2. Life Support Facility. The Life Support function may be located within the Squadron Operations facility or as a separate facility. Space authorization for the Life Support facility is dependent on the number of flying crew members supported. Additional consideration must also be given to the type and number of weapons systems supported and any associated specialized equipment and training requirements. The Life support function is authorized 5,500 square feet of workshop space (based on a standard 8 PAA squadron {15 PAA for fighter squadrons}), 1,000 square feet of training/classroom space, and an additional 3 square feet per supported flying position for equipment storage. Space authorizations for unique weapons systems or mission configurations will be determined on a case-by-case basis.

6.4.3. Pararescue Operations: Facility provides administrative, training, storage, and functional work space for personnel assigned to the Pararescue Jumper (PJ) squadron. Total authorization for this facility is 19,770 square feet (gross). An additional 1,500 square feet of covered secure unconditioned storage space is authorized for storage of squadron training and mobility equipment. [Table 6.5.](#) shows proposed space allocation for a Pararescue Squadron.

Table 6.5. Pararescue Squadron Operations.

DESCRIPTION	SCOPE (SF)	Notes
Command Section:		
Commander	140	1 AGR CRO
PJ Chief (NCOIC)	100	1 AGR
Ed & Training Specialist	85	1 AGR
Orderly Room	250	
Conference Room	400	
Admin Storage	200	Files & storage
Operations Section		
Operations Chief	120	1 TR CRO
Operations Management	100	1 TR CRO
Scheduling (DOS)	100	
Plans (DOX)	85	1 AGR CRO
Standardization Evaluation (Stan/Eval)	50	1 TR
Life Support Maintenance/Storage	3,000	
Brief/Debrief rooms	170	2 @ 85 SF each
Administrative Storage/Files	200	
Flights		
Alpha Flight Commander	100	1 AGR CRO
Alpha Flight Assistant Commander	50	1 TR CRO
PJ Individual Storage Lockers	650	18 PJs @ 36 SF each
Bravo Flight Commander	100	1 AGR CRO
Bravo Flight Assistant Commander	50	1 TR CRO
PJ Individual Storage Lockers	650	18 PJs @ 36 SF each
Charlie Flight Commander	100	1 AGR CRO
Charlie Flight Assistant Commander	50	1 TR CRO
PJ Individual Storage Lockers	650	18 PJs @ 36 SF each
Controlled Substance Storage	50	
Medical Records Storage/Flight Files	200	
Medical Training Support Equipment	180	
Medical Supplies	400	
General/Shared Space		
Classroom(s)	900	
Dining/Kitchen /Break	280	
Supplies Storage/Supply Office	1,000	
Alert Equipment Storage	800	
Equipment Staging/Mission Build-up	600	
Parachute Storage (with space savers)	400	
Scuba Equipment Storage/Wash Room	400	
Drying Room	500	
Locker Room/Shower	900	
Zodiac Rack (3 @ 20x8)	480	

DESCRIPTION	SCOPE (SF)	Notes
ISU-90 Storage (7 @ 8x6)	400	
Communications/Electrical	320	
Subtotal (net)	15,210	
Overhead (30%)	4,560	
TOTAL (gross)	19,770	

NOTE: Provide 1,500 SF of separate secured unconditioned space for mobility/training equipment storage.

6.5. Tanker/Airlift Control Flight (ALCF). ALCF units are authorized a total 9,810 square feet (gross) for all administrative, training, storage, and functional work space as shown in [Table 6.6](#). Facilities should include high bay storage areas in order to facilitate vertical storage of mobility equipment to the maximum extent possible.

Table 6.6. Tanker/Airlift Control Flight.

DESCRIPTION	SCOPE (SF)
Commander	140
Senior ART	110
Superintendent	120
Administration	1,530
Classroom	600
Communications Work Area/Storage	200
Mobility Storage	120
High Bay Pallet Storage	2,500
Locker Rooms	600
Vehicle Garage	1,400
Communications/Electrical	230
Subtotal (net)	7,550
Overhead (30%)	2,260
TOTAL (gross)	9,810

[Table 6.7](#) shows proposed space allocation for a Tanker/Airlift Control Flight. Additional mobility storage space is required for UTC equipment items that may be assigned to the unit. The following additional authorizations (net) are approved for specific UTC packages.

Table 6.7. ALCF Sized by UTC Packages.

UTC	SCOPE (SF)
7E1CA	2,050
7E1CB	600
7E1BD	600
7E1AF	525

6.6. Intelligence Flight. Intelligence flights are authorized a total of 5,100 square feet (net) for all administrative, training, storage, and functional work space. Facilities should include a minimum of 2,600 square feet of secured work and storage area for processing classified materials.

Chapter 7

CATEGORY GROUP 17, TRAINING FACILITIES

7.1. Basic Item 171-443, Reserves Forces General Training Support. These facilities support various AFRC non-flying units including, but not limited to, Medical Service Squadrons, Aeromedical Staging Squadrons, Combat Logistics Support Squadrons, Communications Flights, and Security Police Flights. Space within these facilities includes office and administrative areas, administrative support space, classrooms, and lockers. Determine additional space requirements separately for additional mobility equipment storage, training mockups, work areas, or other requirements unique to a particular unit.

7.2. Combat Logistic Support Squadrons: Combat Logistic Support Squadrons (CLSS) units at AFRC host and tenant locations are authorized a total 6,600 square feet (gross) for all administrative, training, storage, and functional work space. **Table 7.1.** shows proposed space allocation for a Combat Logistic Support Squadron.

Table 7.1. Combat Logistics Support Squadron.

DESCRIPTION	SCOPE (SF)
Commander	140
Logistic Plans Program Officer	120
Supply Officer	100
First Sergeant	120
Maintenance Staff Officer	100
Aircraft Manager	100
Maintenance Repair Manager	100
Aeronautical Engineer	100
Aerospace Propulsion Support	100
Administrative Support (Open Offices)	2,000
Conference Room	250
Training Rooms (2 @ 300 SF)	600
Team Kit Storage (14 @ 30 SF ea, see Note 2)	420
Pallet Generation	250
Netting Storage	60
Parts Storage	200
Work Bench	80
CLSS Supply Manager	100
Communications/Electrical	140
Subtotal (net)	5,080
Overhead (30%)	1,520
TOTAL (gross)	6,600

NOTES:

1. One training room per 4 Aircraft Teams-4 maximum.

2. Based on 14 teams. Size facility according to actual number of teams.

7.3. Communication Units. Deployable communications units located at AFRC installations are authorized a total of 3,430 square feet (gross) for administrative, training, storage, and maintenance functions. **Table 7.2.** shows proposed space allocation for a communications squadron facility. This unit may be co-located with the Communications and Information Facility (section 5.3) at AFRC host base locations.

Table 7.2. Communications Squadron.

DESCRIPTION	SCOPE (SF)
Commander	140
Air Reserve Technician	100
First Sergeant	120
Administrative	250
Radio Operations	300
Data Operations	400
Maintenance	600
Maintenance Storage	400
Classroom	250
Communications/Electrical	80
Subtotal (net)	2,640
Overhead (30%)	790
TOTAL (gross)	3,430

7.4. Security Forces Squadron at Tenant Bases. AFRC Security Forces Squadrons located on Active Duty installations (tenant locations) are authorized a total of 9,380 square feet (gross) for all administrative, training, storage, and functional work space. Authorization for unit specific mobility storage may be determined on a case-by-case basis. **Table 7.3.** shows proposed space allocation for a SFS at a tenant location.

Table 7.3. Security Forces Squadron (Tenant Location).

DESCRIPTION	SCOPE (SF)
Commander	120
First Sergeant	100
Security Forces Manager/Superintendent	100
Orderly Room/Unit Administration	220
Air Reserve Technician (2 @ 100 SF)	200
Career Advisor/Safety/Historian/DP	100
Classroom (Partitioned) (note 2)	1,140
Training NCO/Instructors	255
Quality Control	
(100 SF test area + 2 @ 85 SF)	270
Unit Learning Center	150
Squad Leaders' Room (3 @ 85 SF)	255
Fire Team Leaders' Room (3 @ 85)	255

DESCRIPTION	SCOPE (SF)
Mobility Storage/Pallets/Build-up (note 3)	2,800
Mobility/Supply Administrative Area	200
Control Center (CSC/LED/BDOC) Training Area	100
General Storage	150
Break Room	150
Men's Locker Room/Shower	300
Women's Locker Room/Shower	150
Communications/Electrical	200
Subtotal (net)	7,215
Overhead (30%)	2,165
TOTAL (gross)	9,380

NOTES:

1. Space requirements for the 920th, 931st, 932nd and 939th MSS/SF equates to 85 SF per authorized ART + 50 SF per authorized TR.
2. Actual SF may vary depending on unit requirements. See AFH 32-1084, Table 6.1. for additional guidance.
3. Actual SF may vary depending on the number of unit equipped UTCs. Calculation is based on 700 SF per authorized unit equipped UTC.

7.4.1. Combat Arms Training: This facility supports the activities of a combat arms section at AFRC locations. It contains space for classroom instruction; program administration, weapons maintenance; weapons cleaning and degreasing; alarmed weapons and ammunition storage; latrine facilities and miscellaneous storage. The facility may be equipped with either the Combat Arms Training Simulator (CATS) or the Squad Engagement Training Simulator (SETS). The standard training facility supports up to 21 firing points and is authorized a total of 7,920 square feet for the CATS or 7,120 square feet for the SETS. **Table 7.4.** shows proposed space allocation for a Combat Arms Training Facility.

Table 7.4. Combat Arms Training.

DESCRIPTION	SCOPE (SF)	
	CATS	SETS
Classroom 1	975	975
NCOIC	100	100
Instructor's Offices (75 SF/Auth CA Instructor)	900	900
Weapons Maintenance Shop	300	300
Weapons Cleaning/Degreasing Room (note 2)	250	250
Alarmed Weapons and Ammunition Storage Room	150	150
Miscellaneous Storage	120	120
Combat Arms Training Simulator (CATS)	2,625	
Squad Engagement Training Simulator (SETS) (note 3)		2,025
Men's Locker Room/Shower	175	175

DESCRIPTION	SCOPE (SF)	SCOPE (SF)
	CATS	SETS
Women's Locker Room/Shower	140	140
Breakroom	175	175
Communications/Electrical	180	170
Subtotal (net)	6,090	5,480
Overhead (30%)	1,830	1,640
TOTAL (gross)	7,920	7,120

NOTES:

1. Actual SF may vary depending on requirements. See AFH 32-1084, Table 6.1. for additional guidance.
2. Add 12 SF for each firing lane over 21 firing lanes.
3. CATS (3 @ 875 SF ea = 2,625 SF) or SETS [1,125 SF (45 ft x 25 ft for 1 screen – 4 to 5 lanes); 1,575 SF (45 ft x 35 ft for 2 screen – 8 to 10 lanes); and 2,025 SF (45 ft x 45 ft for 3 screen – 12 to 15 lanes).]

7.5. Civil Engineer Squadrons. Civil engineer squadrons at host and tenant locations are authorized a total of 11,960 square feet (gross) for all training, administrative, storage and functional work space. **Table 7.5.** shows proposed space allocation for a Civil Engineering Squadron facility. At AFRC host base locations the CE squadron may be co-located with the Base Civil Engineer Administration and Maintenance Facility. Up to 800 square feet of additional outside covered storage may be provided for securing mobility equipment and supplies.

Table 7.5. Civil Engineering Squadron.

DESCRIPTION	SCOPE (SF)
Commander	140
First Sergeant	120
Orderly Room	220
ART	200
Career Advisor	85
Training/Test Room/CERTEST	150
Conference Room	250
Operations Officer	120
Superintendents (5@ 100 SF ea)	500
Officer Work Area	200
Shop Foremen (4 @ 40 ea)	160
Engineering Assistant, Supervisor, Drafting, Map	500
Cabinets	
Production Control, Scheduling, Mobility Control	500
Center	
Supply Room	280

DESCRIPTION	SCOPE (SF)
Storage/Non Standard Mobility	2,000
Mobility Pallets, Storage/Build-up	2,500
Chief (Superintendent)	120
Classrooms (3 @ 300)	900
Communications/Electrical	250
Subtotal (net)	9,200
Overhead (30%)	2,760
TOTAL (gross)	11,960

7.5.1. Explosive Ordnance Disposal (EOD) Facility. The EOD function is normally part of, and co-located with, the Civil Engineering squadron. EOD functions co-located with Civil Engineering Squadrons are authorized a total of 2,457 square feet (gross) for all administrative, storage, and functional work space. Classroom space at these locations should be shared with the associated CE squadron. If the EOD unit is a stand alone function is it authorized an additional 650 square feet (gross) for separate classroom and facility overhead space.

7.5.2. Basic Item 610-913, Disaster Preparedness. The Disaster Preparedness function is normally part of, and co-located with, the Civil Engineering squadron. Disaster Preparedness functions co-located with Civil Engineering Squadrons are authorized a total of 3,050 square feet (gross) for all administrative, storage, and functional work space. This allocation includes a dedicated classroom for the Disaster Preparedness function.

7.6. Firefighters (Tenant). Reserve firefighters are to be located in a separate annex to the host fire station. The annex should be located off to the side of the fire station with an outside entrance. It should not be located in the middle of the host operation so that the host is required to use the reserve space as access to other host space. Use the space criteria found in the *USAF Fire Station Design Guide* (660 square feet) which also has a suggested layout.

7.7. Basic Item 171-445, Reserve Forces Operational Training. These facilities include wing and/or group staff functions. Wing and Group headquarters facilities may include a variety of various administrative, management, and training functions. Accurately identify the functions to be included in the facility when determining authorized facility scope to avoid duplication. Total all net facility space authorizations for functions to be included in the facility and apply overhead (30%) to determine gross facility space authorization. In addition to function specific space, Wing Headquarters facilities are authorized an additional 3,700 square feet (gross) for break area, conference rooms, files storage, LAN equipment, and communications/electrical/mechanical space.

7.7.1. Wing Command Section: A total of 1,790 square feet is authorized for the Wing Command section administrative space. This allocation includes office space for the commander, vice commander, executive officer, advisors, secretary, and command conference room.

7.7.2. Mission Support Group Command Section: The Mission Support Group Commander and associated staff are authorized a total of 780 square feet (gross). This allocation includes space for the Commander, Deputy Commander, Executive, First Sergeant, and Administrative Assistant.

7.7.3. Operations Group Command Section: The Operations Group Commander and associated staff are authorized a total of 780 square feet (gross). This allocation includes space for the Com-

mander, Deputy Commander, Executive, First Sergeant, and Administrative Assistant. This function may be located in the Squadron Operations facility or the Wing Headquarters.

7.7.4. Maintenance Group Command Section: The Maintenance Group Commander and associated staff are authorized a total of 780 square feet (gross). This allocation includes space for the Commander, Deputy Commander, Executive, First Sergeant, and Administrative Assistant. This function may be located in the Wing Headquarters or one of the maintenance shop facilities.

7.7.5. Wing Plans Office: The Wing Plans Office is authorized a total of 750 square feet for all office and associated administrative space.

7.7.6. Wing Inspector General (IG): The Wing IG offices are authorized a total of 220 square feet . This allocation includes space for two private (secure) offices.

7.7.7. Judge Advocate: The Wing Judge Advocate is authorized a total space calculated to accommodate the manning at each office. The total space requirement will be calculated to provide 150 sq. ft. for the Staff Judge Advocate, and 120 square feet for each additional judge advocate, 64 square feet for each paralegal, and 450 square feet for all management, administrative, storage, library, and functional work space. Private (secure) offices must be provided for each assigned attorney in accordance with AFI 51-504. When the AFRC Wing is collocated with an active duty wing staff judge advocate office, the Judge Advocate function will not include a space allocation for common use facilities.

7.7.8. Chaplain: The Wing Chaplain office is authorized a total of 150 square feet . This allocation includes space for one private (secure) office and a waiting area. Add 100 square feet for each additional chaplain assigned. Each chaplain is authorized a private office.

7.7.9. Historian: The Wing historian is authorized a total of 200 square feet for office/administrative and storage space.

7.7.10. Wing Safety Office: The Wing Safety office is authorized a total of 650 square feet at AFRC operating locations. This allocation includes space for all management, administrative, storage, and functional work space. The Chief of Safety should be provided a private (secure) office.

7.7.11. Mission Support Squadron: The Mission Support Squadron Commander and associated staff are authorized a total of 660 square feet. This allocation includes space for the Commander, First Sergeant, and Orderly Room.

7.7.12. Operations Support Squadron: The Operations Support Squadron and associated staff are authorized a total of 1,690 square feet. This allocation includes space for the Commander, administrative assistance, Training, Tactics, Intelligence, SORTS, and associated offices. This function may be located in the Squadron Operations facility or the Wing Headquarters.

7.7.13. Logistics Readiness Squadron: This squadron provides overall direction for base logistics processes related to vehicles, cargo movement, passenger movement, personal property, supplies, equipment, deployment planning and operations, fuels, and when appropriate, logistics plans. The Logistics Readiness Squadron command section is authorized a total of 1,560 square feet(gross). This allocation includes space for the Commander, First Sergeant, Orderly Room, Secretary, and document storage. Squadron associated functions will typically operate out of facilities dedicated to their particular function (i.e. vehicle maintenance, supply warehouse, etc.).

7.7.13.1. Logistics Readiness Squadron – Readiness Element: This element of the Logistics Readiness Squadron manages contingency operations and squadron readiness planning and

reporting. Total space authorizations for this function are 1,000 square feet at tenant locations and 830 square feet at AFRC host base locations.

7.7.13.2. Logistics Readiness Squadron – Management and Systems Element: This element of the Logistics Readiness Squadron provides training, customer service, resource and systems management, and Quality Control oversight at AFRC installations with contractor operated base support functions (see [Chapter 2](#)). Total space authorization for this function is 4,120 square feet. [Table 7.6.](#) shows proposed space allocation for the Logistics Readiness Squadron – Management and Systems Element.

Table 7.6. Logistics Readiness Squadron – Management and Systems Element.

DESCRIPTION	SCOPE (SF)
Customer Service	400
Logistics Support Manager	100
Accountable Officer	100
QAEs (6 total)	480
Training Section	300
Classrooms	1,000
Resource Management	100
Systems Management	200
Other Reservists (8 total)	400
Communications/electrical	90
Subtotal (net)	3,170
Overhead (30%)	950
TOTAL (gross)	4,120

7.7.13.3. Logistics Readiness Squadron – Other Elements: Additional elements of the Logistics Readiness Squadron are addressed as follows: Distribution and Traffic Management Element in section 2.8; Vehicle Management Element in section 2.4; Fuels Management Element in section 4.1.

7.7.14. Military Personnel Flight: The Military Personnel Flight is authorized a total of 2,140 square feet for all management, administrative, storage, and functional work space. This allocation includes space for the commander, administrative staff, customer service area, personnel employment, personnel relocation, systems, and career enhancement offices. This authorization is based on a Military Personnel Flight (MPF) with 16 full time persons and 8 reservists. For larger MPFs, add 85 square feet for each additional assigned full time person and 50 square feet for each additional reservist.

7.7.15. Family Readiness: Family Readiness Programs operated at AFRC owned installations are authorized a total of 1,100 square feet for all administrative and work center functions. Family Readiness Programs operated where an AFRC unit is tenant to another command are authorized a total of 305 square feet for all administrative and work center functions. Tennant units that are authorized a full-time Family Support Director will be allowed square footage equal to that allocated for AFRC owned installations.

7.7.16. Civilian Personnel: At AFRC host base installations the Civilian Personnel function is authorized a total of 870 square feet for all administrative functions and associated storage. This

authorization is based on a Civilian Personnel office with 5 full time persons. For larger offices add 85 square feet for each additional assigned full time individual.

7.7.17. Public Affairs: The Public Affairs office is authorized a total of 640 square feet for all management, administration, and storage requirements.

7.7.18. Financial Management/Budget Advisor: This function includes space for both base operations support Financial Management staff and the mobility tasked Reservists assigned to Wing/Group Finance function. Financial Management offices at AFRC owned installations are authorized a total of 5,190 square feet (gross) for all administrative, training, storage, and work center functions. Financial Management offices at AFRC tenant locations are authorized a total of 2,250 square feet for all associated functions. These standards are based on an average Financial Management staff of up to 18 full time positions at AFRC owned bases and up to 8 full time positions at tenant locations. An additional 85 square feet is authorized for each additional staff member. **Table 7.7.** shows proposed space allocation for the Financial Management function.

Table 7.7. Financial Management Function.

DESCRIPTION	SCOPE (SF)
Chief	120
Financial Officer	100
Management Analyst	100
Budget Analyst (85 SF per person)	170
Budget Officer	100
Administration (12 @ 85)	1,020
Reservists Open Office Area (18 @50)	900
FM Reserve Officer	120
Enlisted Superintendent	100
Full Time ART	85
Administration Storage	100
Files	100
Computer Server Room	50
Conference Room	200
Customer Service Area	200
Computer Training Area	300
Mobility Training Storage (100/LOG DET)	100
Communications/electrical	120
Subtotal (net)	3,990
Overhead (30%)	1,200
Total	5,190

7.7.19. Services: This function includes space for base operating support services function management (where present and approved) as well as management/administrative space for mobility tasked Reservists assigned to the Wing/Group Services function. Services offices at AFRC owned installations are authorized a total of 1,465 square feet for all administrative, training, storage, and work center functions. Services offices at AFRC tenant locations are authorized a total of 1,295 square feet for all associated functions. Services-unique facilities such as club, fitness center, dining facility, and

lodging, will follow the applicable design guide, or AFI 32-1022, *Planning and Programming Nonappropriated Fund Facility Construction Projects*. Storage space requirements for Services training and UTC kits are described in section 10.4.

7.7.20. Military Equal Opportunity: Military Equal Opportunity functions staffed with up to three individuals are authorized a total of 250 square feet. An additional 85 square feet is authorized for each additional staff member.

7.7.21. Contracting: Contracting functions operating at AFRC owned installations are authorized 1,605 square feet for all administrative and work center functions. This provides work and administrative space for up to 12 assigned individuals. An additional 85 square feet is authorized for each additional staff member.

7.7.22. Wing Education and Training Office: Education and Training Offices located at AFRC installations are authorized 690 square feet for administrative functions. Training space associated with these functions should include 700 square feet for Air Technology Network (ATN) or distance learning classroom, 500 square feet for Computer Classroom, 500 square feet for a computer laboratory/learning center, and 500 square feet for a testing room (computer testing and/or conventional testing). Each classroom should be configured to support 20 students and should be joint use space open to all installation squadrons for their training needs.

7.8. Combat Communications. Combat Communications Squadrons are authorized a total of 2,970 square feet for administrative, training, and operations management functions. An additional 6,750 square feet is also authorized for maintenance work areas, tool storage and equipment storage. Outdoor uncovered storage area should be provided for storage of vehicles and mobility equipment assigned to the squadron. The total facility space authorization for a Combat communications squadron is 12,640 square feet (gross). **Table 7.8.** shows proposed space allocation for a Combat Communications Squadron.

Table 7.8. Combat Communications Squadron.

DESCRIPTION	SCOPE (SF)
Commander	140
Conference Room	200
Command Staff Work Area	450
Administration	
Personnel	
Training	
Multipurpose Computer Workstation	
Testing Room	100
Administrative Storage Room	50
Operations Superintendent's Office	100
COMSEC Storage Room	150
Tactical Operations Room	100
Operations Work Area	450
Communications Operations	
Radio Operations	
Systems Control	

DESCRIPTION	SCOPE (SF)
Multipurpose Computer Workstation	
Operations Storage Room	50
Chief of Maintenance Office	100
Job Control Room	150
Log Plans/Mobility Control Center	150
Maintenance Work Area	450
Radio Maintenance	
Communications Systems Maintenance	
Multipurpose Computer Workstation	
Maintenance Shop Bay	2,500
Test Equipment Room	200
Benchstock/Tool Room	200
Systems Maintenance Room	500
Classroom	500
Warehouse	2,900
Communications/Electrical	280
Subtotal (net)	9,720
Overhead (30%)	2,920
TOTAL (gross)	12,640

7.9. Recruiters. Recruiting functions are authorized a total of 1,240 square feet (gross) for all administrative and storage requirements. This allocation is based on an average recruiting staff of up to 5 assigned individuals. An additional 120 square feet is authorized for each additional recruiter assigned. Regional recruiting offices are authorized an additional 300 square feet for meeting space. **Table 7.9.** shows proposed space allocation for a Recruiting function..

Table 7.9. Recruiting.

DESCRIPTION	SCOPE (SF)
Senior Recruiter	140
Administration	100
Recruiters (3 @ 120)	360
Waiting Area	200
Storage	120
Communications/electrical	30
Subtotal (net)	950
Overhead (30%)	290
TOTAL (gross)	1,240

NOTES:

1. Add 120 SF for each additional recruiter.
2. Regional recruiter offices are authorized 300 SF meeting space.

7.10. Deployment Processing Facility. Deployment processing facilities are applicable to AFRC host installations. Not all AFRC bases are the same and each base develops its own Installation Deployment Plan (IDP) defining its deployment process. This information is provided to ensure adequate space is identified and computers, communications and connectivity are available for AFRC unit deployment processes. Existing facilities should be used or modified to meet these requirements. When the deployment control center (DCC) is not active, Deployment Processing Facility space will be co-used for other functions. Each AFRC installation will deploy personnel and cargo using the five automated Air Force standard systems for deployments, integrated deployment system (IDS). IDS incorporates logistics module (LOGMOD) for providing Load & Packing Lists to deploying squadrons and Deployment Schedule of Events (DSOE) to monitor all deployments; the Cargo Movement & Operating System (CMOS) & Computer Aided Load Manifesting system (CALM) for the movement and tracking of Air Force assets; Manpower & Personnel (MANPER) system for processing personnel; and LOGMOD Stand-Alone (LSA) to aid deploying squadrons in managing their assets and training. IDS uses an installation's local area network (LAN). Basic "minimum" facility requirements are listed below.

7.10.1. Deployment Control Center (DCC). AFRC Host Bases are authorized 1,670 square feet for all functions associated with the Deployment Control Center. Deployment command and control for the Wing Commander is monitored from this room. This room requires "controlled access," and must be capable of operating in classified mode in support of classified DMS, Global Command and Control System (GCCS), and operations plan (OPlan) directives. Normal manning of the DCC is two representatives from the Logistics Plans office (Installation Deployment Officer and Logistics Plans representative); Supply and Transportation representatives; a Military Personnel Flight representative; an administrative representative; and representatives from the largest deploying squadrons and tenant units (minimum manning eight, maximum depends on the number of deployment tasked units but could exceed 20). A GCCS terminal and STUIII must be in the DCC. A minimum of five desktop computers and workstations with LAN connectivity is required. The ideal location of the DCC is in the same building or near the personnel and cargo deployment functions, personnel processing facilities, and the flight line. All deployment facilities must be heated, air-conditioned, and lighted as well as normal offices. Automatic switching backup power generation is authorized, and back-up facilities should be identified in case fire, natural disaster, terrorist activity, or other event renders the primary facilities unusable. The DCC should be collocated with the Logistics Plans office.

7.10.1.1. A conference/briefing room is required for deployment concept briefings. This room may be one normally used for other purposes, such as a deployment training classroom or personnel deployment function (PDF) passenger briefing room. The concept briefing room should be located within the same building as the DCC and be secure to brief classified SECRET.

7.10.1.2. The load planning function must be adjacent to or in the immediate proximity of the DCC and the Cargo Processing Facility (CDF). It should accommodate at least two people and two computers connected to the LAN. It should be a quiet and secure area.

7.10.1.3. The quality control function must be adjacent to or in the immediate proximity of the DCC. It should accommodate at least four people and two computers connected to the LAN. It should be a quiet and secure area.

7.10.2. Personnel Deployment Function (PDF). AFRC Host Bases are authorized 3,025 square feet for the Personnel Deployment Function. This allocation includes all administrative, work, waiting/holding, and personnel processing functions. The PDF office is usually manned by two to four people, must have LAN connectivity, and must include a copier unless a suitable one is available

nearby. The PDF continuously monitors deploying personnel requirements and publishes deployment orders. The PDF must be located in immediate proximity to the Personnel Readiness Unit (PRU) and personnel processing facility:

7.10.2.1. Personnel Processing Facilities. This facility requires a personnel processing line consisting of eight work stations. Each station is manned by 1-2 people behind tables, in booths, or in cubicles. The facility also has a private area for counseling and administering injections in the hip (for the legal, chaplain, and medical stations); an indoor holding/briefing area at the beginning of the line for 100 people (seating desired); and at least two rooms to brief passengers after processing for deployment, and "hold" them until they board transportation (should hold at least 100 people and provide comfortable seating). These rooms at the end of the personnel processing line must allow PDF personnel to control entry and exit, to maintain the integrity of the deploying force; should include a projection screen or large screen TVs to provide training or entertainment (cable TV desired) to the deploying personnel; must be near well-stocked vending machines, water fountain, and restrooms. The holding/briefing rooms must be quiet and secure and cleared for classified SECRET. Holding/briefing rooms may be used for other functions during normal operations, such as deployment and other training; meetings; and may be used for the deployment concept briefing. Adjacent to or in the proximity of the DCC and PDF/PRU is the preferred location of the personnel processing facilities.

7.10.3. Cargo Deployment Function (CDF). This function is usually located on or near the cargo marshaling area. It is the installation's focal point for all cargo processing activities. LAN connectivity is required in this area. This area should provide enough room to check and process all accompanying cargo documentation. It also dispatches cargo load teams to load and unload support aircraft. Normal CDF operations (cargo in-check, marshaling, and loading) can be done outdoors (ramp, apron, etc.) or in designated hangar space. The unit Installation Deployment Plan (IDP) should specify procedures for this process.

7.10.4. Deployment Training Classrooms. At least two rooms conducive to training at least 20 people at a time are required. Training rooms must be equipped to use standard audio-visual equipment and have LAN connectivity to train Unit Deployment Managers (UDMs) in LOGMOD. Passenger holding/briefing rooms and the room used for the deployment concept briefing may be ideal for this purpose. The IDO, PRU/PDF, and CDF must provide various initial and recurring courses to UDMs, CDF augmentees, and deploying personnel. These rooms may also be used for meetings, conferences, and other base meetings. Ten LAN drops and computers are needed in at least one deployment training classroom for IDS training.

7.11. Basic Item 171-449, Reserve Forces Aeromedical Evacuation Training Facility. In general, Aeromedical Evacuation Squadrons (AES) train to perform in-flight patient care. This facility provides space for training and operations of aeromedical evacuation (AE) units. AES located at AFRC installations and at Tennant locations are authorized 13,090 square feet (gross) for all administrative and training functions. In addition, these units are authorized 1,170 square feet (gross) for mobility equipment storage, including storage of medical mobility kits. [Table 7.10.](#) shows proposed space allocation for an AES.

Table 7.10. Aeromedical Evacuation Squadrons.

DESCRIPTION	SCOPE (SF)
Commander	140
Conference Room	250
1st Sergeant	120
Chief Nurse IMC	120
Inflight Medical Care NCOIC Nursing Office	400
Inflight Chiefs	200
Training Office	250
Administrative	450
Chief Operations	140
Secure Medical Supplies	80
Medical Equipment Storage	900
Medical Equipment Lab	500
Chemical Ensemble Storage	200
Unit Training Room (6 @ 400)	2,400
Flying/Ground Training	300
Standardization/Evaluation	250
Standardization/Evaluation Testing	100
Scheduling	300
Computers/Data processing	480
FCC	150
Radio Room	200
Mission Control	450
CPR Training	600
Staff Development	250
CDC Training	150
Medical Readiness and Intel/Mobility/DP/Ancillary Training	400
Communications/Electrical	290
Subtotal (net)	10,070
Overhead (30%)	3,020
TOTAL (gross)	13,090

7.11.1. AES with multiple UTC equipment taskings are authorized and additional 3,900 square feet (gross) of administrative and training space as well as an additional 9,750 square feet (gross) of storage space. Variations in space authorization for AES will be reviewed and validated on a case-by-case basis by HQ AFRC/SGS.

7.11.2. Increase flying squadron Life Support storage authorization by 3 square feet (net) for each flying crew member assigned to AES

7.12. Basic Item 171-450, Reserve Forces Medical Training and Administration Facility. Medical units include Aeromedical Staging Squadrons (ASTS) and Medical Squadrons (MDS). While units differ in tasking, they share similar administrative and training space requirements. However, unit tasking and

unit manning must be considered when calculating space requirements. Variations in space authorization for medical units will be reviewed and validated on a case-by-case basis by HQ AFRC/SGS.

7.12.1. **Aeromedical Staging Squadrons (ASTS)** train to perform on-ground patient care at forward and deployed locations. There is considerable variation in aeromedical staging squadron size throughout the Command. Small to mid-sized ASTS (those assigned a 50 to 150 bed UTC) are authorized 9,490 square feet (gross) of training and administrative space and an additional 650 square feet (gross) for storage. Large ASTS (those assigned a 151 to 250 bed UTC) are authorized 10,800 square feet (gross) of training and administrative space and an additional 650 square feet (gross) for storage. **Table 7.11.** shows proposed space allocation for an ASTS.

Table 7.11. Aeromedical Staging Squadrons.

DESCRIPTION	SCOPE (SF)	
	ASTS (50 - 150 BED)	ASTS (151 - 250 BED)
Commander	140	140
Executive	100	100
1st Sergeant	120	120
ARTS/Administration	750	900
Career Advisor	100	100
Conference Room	200	300
Chief Nurse	100	100
Nursing Services Area	750	1,000
Training/Scheduling	150	150
Skills Laboratory (one per installation)	750	1,000
Medical/Dental Records	300	300
Physician Section	220	220
Medical Readiness Staff	150	200
Pharmacy Staff	200	250
Dental Administration	150	150
Optometry Administration	100	100
Logistics	200	300
Storage	500	500
Classrooms	1,100	1,400
Aeromedical Staging Facility (Training)	500	500
OJT	300	30
Break Area	200	200
Communications/electrical	210	250
Subtotal (net)	7,300	8,310
Overhead (30%)	2,190	2,490
TOTAL (gross)	9,490	10,800

7.12.1.1. If an ASTS unit located on an Active Duty installation includes an aerospace medicine package (responsible for physical exams on AFRC personnel), they are authorized an additional

975 square feet (gross) for the Chief of Aeromedical Services and the Physical Exam Section staff. Space for conducting physical exams is joint-use space located in the host Active Duty clinic.

7.12.2. **Medical Squadrons (MDS)** are responsible for operation of medical exam facilities at AFRC installations and may have mobility taskings. There is considerable variation in medical squadron size throughout the Command depending primarily on the size of the wing they are assigned to support. Small to mid-sized MDS (those located at a base with a military population of less than 1,500) are authorized 10,880 square feet (gross) for administrative, training and medical exam space. Large MDS (those located at a base with a military population greater than 1,500) are authorized 12,550 square feet (gross) for administrative, training and medical exam space. [Table 7.12.](#) shows proposed space allocation for an MDS. Each installation is authorized only a single medical exam facility. Medical exam space should be joint-use with other co-located services (i.e. Navy, Air National Guard, etc.) where possible.

Table 7.12. Medical Squadrons.

DESCRIPTION	SCOPE (SF)	
	MDS (< 1,500 patients)	MDS (> 1,500 patients)
Commander	140	140
Administration	400	400
1st Sergeant	120	120
Chief Nurse	120	120
Office/Exam Rooms (8 @ 80)	640	800
Immunizations	150	150
Trauma Treatment	300	300
EKG (2 @ 90)	180	180
Medical Technical Station	110	110
Supplies	120	180
General Lab	120	120
Bio Lab	150	150
Skills Lab (one per installation)	700	850
Nursing services Area	700	850
Audio Exam	100	100
Optometry	120	120
Dental (2 @ 120)	240	240
Eye Exam	100	100
Pharmacy	100	100
Dental Administration	120	120
Environmental Health	175	175
Training Officer	120	120
Classrooms	900	1,200
Patient Affairs	120	120
Vital Signs	200	200
Medical Staging	200	250
Radiology	100	100

DESCRIPTION	SCOPE (SF)	
	MDS (< 1,500 patients)	MDS (> 1,500 patients)
Interview Rooms (2 @ 100)	200	200
Medical Records	175	250
Conference Room	200	300
Waiting	600	800
X-Ray	275	275
Dark Room	60	60
Medical Storage	60	60
Communications/electrical	240	280
Subtotal (net)	8,370	9,650
Overhead (30%)	2,510	2,900
TOTAL (gross)	10,880	12,550

7.13. Bioenvironmental Engineering/Military Health. Medical squadrons located on AFRC installations typically include a bioenvironmental engineering (BEE)/military health (MH) office. These functions should be located within the MDS facility whenever possible. Increase MDS facility space authorization by 1,070 square feet (gross) for BEE/MH administrative, storage, and work space when these functions are present. If the BEE/MH office is established as a stand-alone facility, an authorization of 1,430 square feet (gross) will be used. [Table 7.13.](#) shows proposed space allocation for the BEE/MH function.

Table 7.13. Bioenvironmental Engineering.

DESCRIPTION	SCOPE (SF)
Administrative (85 Per Person x 5)	515
Equip Calibration/Lab	200
Storage	50
Health Program Computers	100
Training/Interview Room	200
Communications/electrical	30
Subtotal (net)	1100
Overhead (30%)	330
TOTAL (gross)	1,430

7.14. Basic Item 171-873, Aerial Port Training Facility:

7.14.1. Facility Requirement. These facilities provide for administrative, classroom training, cargo processing and aerial delivery operations functions. Aerial port squadrons (APS) at AFRC installations with 8 PAA, and at Geographically Separated Units, are authorized 11,920 square feet (gross) for all administrative and training functions. Squadrons that support Aerial Delivery Systems (air drop operations) are authorized an additional 12,350 square feet (gross) for build-up, storage, training and parachute packing space. [Table 7.14.](#) shows proposed space allocation for an APS.

Table 7.14. Aerial Port Squadron.

DESCRIPTION	SCOPE (SF)
Administrative	
- Commander	140
- 1 st Sergeant	120
- Advisor (ART)	120
- Orderly Room/Admin.	400
- Career Advisor	120
- Break Room	200
- Locker Room	400
- Supply	300
- Storage for mobility bags	500
- High Value Item Storage	100
Training	
- Material Handling Equipment	200
- Air Terminal Operations Center (ATOC)	200
- Port Operations (RAMP)	200
- Freight	200
- Load Build-up/Storage/Training (see notes)	3,500
- Equipment and Supplies	700
- Safety/Quality	200
- Special Handling	200
- Training Office	200
- Classrooms	900
Communications/electrical	270
Subtotal (net)	9,170
Overhead (30%)	2,750
TOTAL (gross)	11,920

NOTES:

1. Storage should include high bay area for vertical platform storage racks.
2. Space can also be used for indoor vehicle storage at Northern tier locations.
3. This allocation changes to 13,000 for APS supporting Aerial Delivery Systems
4. This allocation changes to 0 for APS co-located with Active Duty APS

7.14.2. Aerial Port Squadrons (APS) co-located with Active Duty functions are authorized 7,020 square feet (gross) for all training and administrative functions and use the host base air freight terminal for "hands on" training.

7.15. Basic Item 171-875, Load Crew Training. Provide an area to accomplish training of armament crews on fighter aircraft. This is usually accomplished on a parked aircraft in a hangar or on a ramp. When

possible a dedicated dock should be provided. A total of 1,000 square feet should be provided for office, load crew ready room and classroom.

Chapter 8

CATEGORY GROUP 21, MAINTENANCE FACILITIES

8.1. Basic Item 211-111, Hangar. Protected space for aircraft maintenance. It includes necessary utility systems and limited office/administrative space. Each AFRC airlift or aerial refueling unit with 8 PAA is authorized one fully enclosed scheduled maintenance hangar, one nose dock unscheduled maintenance hangar, and one nose dock fuel systems maintenance hangar. Northern tier bases should be provided a fully enclosed hangar for accomplishing fuel system maintenance. The number of dock spaces to be provided for fighter/helicopter units, as well as units with more than 8 PAA can be determined by multiplying the number of primary assigned aircraft (PAA) by the following factors as shown in [Table 8.1](#).

Table 8.1. Hangar Size Factors.

AIRCRAFT	FACTOR
Fighter/helicopter	0.25
C-5, C-141, C-17	0.16
C-130, KC-135, B-52	0.15

Formula: Number of aircraft by type x factor = Required covered spaces. Fuel maintenance/corrosion control hangar (Cat. Code 211-179) is not included in this number. **Example:** 12 each C-130 x .15 = 1.8 or 2 covered spaces.

8.2. Maintenance Operations Squadron. This squadron is responsible for developing and publishing the wing flying/maintenance schedule, determining long-range fleet health maintenance priorities, assigning priorities for and coordinating use of shared maintenance resources, providing trend analysis information to the squadron commanders, and providing supply liaison and engine management support for flight line and back shop maintenance. Total authorized space for this squadron is 5,320 square feet (gross). This allocation provides space for offices for the chief of maintenance, classroom, maintenance control, plans, scheduling, documentation, materiel control/Maintenance Supply Liaison (MSL), quality control, records and analysis and administration. [Table 8.2](#) shows proposed space allocation for the Maintenance Operations Squadron.

Table 8.2. Maintenance Operations Squadron.

FUNCTION	SCOPE (SF)
Commander	140
Administration	100
Files/Storage	100
1st Sergeant	120
Orderly Room	600
Quality	300
MOS Superintendent	100
Conference Room	600
Classrooms (4 @ 200)	800
Computer Room/Tech Order Library	400
Financial	110

Training Office	110
Analysis	300
Programs & Mobility	110
Communications/electrical	200
Subtotal (net)	4,090
Overhead (30%)	1,230
TOTAL (gross)	5,320

8.3. Basic Item 211-152, General Purpose Shops. Use the following authorizations for shops supporting 8 PAA airlift/aerial refueling or 15 PAA fighter units. Shop space required to support additional PAA will be determined on a case-by-case basis in coordination with HQ AFRC/LGM. Add 20% facility overhead to determine gross facility space authorization.

Table 8.3. General Purpose Shops (Back Shops) Sized by Weapon System.

FUNCTION	SCOPE (SF)					
	Fighters	C-130	KC-135	C-141	C-5	C-17
Electric, Environ, Battery	1,500	2,500	2,500	3,100	4,500	3,000
Machine	2,500	2,500	2,500	2,500	2,500	2,500
Welding	2,500	2,500	2,500	2,500	2,500	2,500
Sheet Metal	2,500	2,500	2,500	2,500	2,500	2,500
Corrosion Control (Note 1)	2,900	2,900	2,900	3,400	3,400	3,400
Wheel and Tire Repair/Reclamation	1,500	2,000	2,000	2,000	2,000	2,000
Hydraulic, Pneudraulic (Note 2)	1,000	1,500	1,500	1,700	2,000	1,700
Fiberglass, Composite Material	1,000	700	700	1,500	2,500	3,200
NDI (Note 3)	4,000	4,000	4,000	4,000	4,000	4,000
Egress	1,500					
Survival Equipment/Flotation (Note 4)	4,400	4,400	4,400	4,400	4,400	4,400
CTK/RSP/Tool Kit Storage	1,000	1,000	1,000	1,000	1,000	1,000

NOTES:

1. Paint booths require 10 foot minimum ceiling height. Only one AFRC owned paint spray bay/booth is authorized per base
2. All units with refueling capability require additional space to service the refueler boom. This periodical task is normally accomplished in any open area (that is, engine shop aisle, support equipment shop, etc.); however, if no other area is available, an additional 260 square feet (gross) is authorized for the hydraulic shop.
3. If a NDI shop exists on a given base, joint use is required. Facility will not be duplicated.
4. Add 1,400 square feet Crew Storage Space for HC-130/MC-130 units only.

8.4. Basic Item 211-154, Aircraft Organization Maintenance Shop. Aircraft Maintenance Squadron (AMXS) or “flightline maintenance”, is responsible for maintenance and inspection of unit assigned aircraft. Facility requirements are determined by the weapons system supported, number of assigned aircraft (PAA), and hours of operations. Use the authorizations shown in [Table 8.4.](#) for units supporting 8 PAA

airlift/aerial refueling or 15 PAA fighter. Additional authorizations for units required to support additional PAA will be determined on a case-by-case basis in coordination with HQ AFRC/LGM. Add 30% facility overhead to determine gross facility space authorization. **Table 8.4.** shows proposed space allocation for these Units.

Table 8.4. Aircraft Maintenance Squadron (AMXS)/Aircraft Generation Squadron (AGS).

FUNCTION	SCOPE (SF)							
	Fighters	Rescue Helicopter	Rescue HH & C-130	C-130	C-5/C-17	C-141	KC-135	Associate Tanker/Airlift
Maintenance Officer	120	120	120	120	120	120	120	120
Maintenance NCOIC	100	100	100	100	100	100	100	100
Maintenance Debrief	500	300	200	200	200	200	200	200
Flight Officers 2 @ 120	240	240	240	240	240	240	240	240
Conference Room (Briefing)	400	400	400	200	200	200	200	200
Maintenance Training Classroom (3 @ 200)	600	600	600	600	600	600	600	600
Maintenance Administration	300	200	300	300	300	300	300	300
Tool Room/Bench Stock		400	800	800	1,200	1,000	800	500
Tail No. Bins		400	700	600	1,000	800	600	0
Tech Order Library	100	100	100	100	100	100	100	100
Ready Room/Lockers	2,000	1,500	1,500	1,100	1,500	1,500	1,500	1,500
Production Supervisor	100	100	100	100	100	100	100	100
Production Scheduling	200	200	200	200	200	200	200	150
SUPPORT Equipment Maintenance	4,000	3,200	3,500	3,000	4,500	4,500	3,000	0
LOOSE-21 Equipment Storage			1,000	2,000	4,000	4,000	2,000	0
Squadron Commander	140	140	140	0	140	140	0	0
Superintendent	120	120	120	0	120	120	0	0
Administration	120	120	120	0	120	120	0	0
Communications/electrical	270	250	310	290	440	430	300	120
Subtotal (net)	9,310	8,490	10,550	9,950	15,180	14,770	10,360	4,230
Overhead (30%)	2,790	2,550	3,170	2,990	4,550	4,430	3,410	1,270
TOTAL (gross)	12,100	11,040	13,720	12,940	19,730	19,200	13,770	5,500

8.5. Basic Item 211-157, Engine Inspection, Maintenance, and Repair Shop. The engine inspection and repair (I&R) shop provides space for inspection, maintenance, and repair of aircraft engines, storage of spare engines, bearing and inspection shop, parts storage/tool crib, parts cleaning, propeller shop (if required) and office administration. Facility requirements are determined by the weapons system supported Use following authorizations (gross square footage) for units supporting 8 PAA airlift/aerial refueling or 15 PAA fighter units. Additional authorizations for Units required to support additional PAA will be determined on a case-by-case basis in coordination with HQ AFRC/LGM. Add 20% facility overhead to determine gross facility space authorization.

Table 8.5. Engine Inspection, Maintenance, and Repair Shops.

F-16	A-10	C-130	C-5/C-17	KC-135E	KC-135R
7,070	6,900	7,070	10,160	6,900	5,750

8.5.1. Additional Space Requirements. Additional space necessary to support activities such as CEMS/TEMS, additional spare engine storage, will be determined on a case-by-case basis in coordination with HQ AFRC/LGM.

8.6. Basic Item 211-179, Fuel Systems Maintenance Dock. The facility provides the area to perform maintenance on aircraft fuel systems (also may incorporate aircraft washing capabilities). Each operational location is authorized a fuels systems maintenance space. See section [8.1](#).

NOTES:

1. Unless special facilities are available, AFRC units are not authorized any aircraft painting other than maintenance touch-up and then only to the extent authorized by the base environmental office.
2. For F-16 equipped units add 3,000 square feet to the Fuel System Maintenance Dock for tank build-up/training.

8.7. Basic Item 214-467, Refueler Vehicle Maintenance Shop: Space for this function may be provided as either a separate maintenance bay or by adding one bay to the automotive shop. Refueler maintenance bay is authorized a scope of 1,800 square feet (based on R-11 vehicle requirements). If added to the automotive shop, this bay must be separated by a fire wall. If constructed as a separate facility, add 300 square feet for work bench and tool storage. Refueler maintenance facility must be provided with a single overhead door, a forced ventilation/exhaust system, a fume monitoring system, floor drains connected to an oil water separator, and an explosion proof electrical/telephone system.

8.8. Basic Item 215-552, Weapons Release and Gun Systems Shop. The facility provides space for performing maintenance on aircraft weapons release systems and associated equipment. In addition to normal shop space, the facility provides training space, office, bench stock/tool room, locker room, and weapons load storage space. Facility space requirements are dependent on aircraft type as detailed in [Table 8.6](#).

Table 8.6. Weapons Release and Gun Systems Shop.

AIRCRAFT TYPE	SCOPE (SF)
A-10	11,300
F-16	12,700
HH-60G/C130N/P	5,500
B-52	20,000

If the unit is assigned Alternate Mission Equipment (AME) additional space is authorized for storage. Allow an additional 2,000 square feet for F-16, 1,000 square feet for A-10 and 1,000 square feet for CSAR aircraft.

8.9. Basic Item 216-642, Munitions Maintenance, Training and Storage Facilities. These facilities are used to inspect, test, assemble, maintain and store missiles, munitions and munitions trailers. Administrative operations associated with this functions are authorized a total of 2,200 square feet (gross) for office, classroom, dispatch, munitions control, ready room, and lockers. Maintenance and storage space authorizations are dependent on the type of weapons systems being supported by the unit. See [Table 8.7.](#) for specific maintenance and storage space authorizations. Facility siting must comply with explosives safety quantity distance criteria.

Table 8.7. Munitions Maintenance and Storage.

FUNCTION BREAKDOWN	SCOPE (SF)
Maintenance Area:	
- Paint Bay (required at all locations)	500
- Mechanical Room (required at all locations)	300
- Trailer Maintenance (Drive Thru) 30x50 (required at all locations)	1,500
- Munitions Inspection area (required at all locations)	620
- Missile Maintenance Bay 25x50 (notes 1, 2, 3)	1,250
- ALS/ULS Process/Inspect -- 20mm Munitions	600
- ALS/ULS Process/Inspect -- 30mm Munitions	960
- Practice Processing (BDU Process/Inspection)	620
- Chaff/Flare maintenance/inspection (note 4)	900
Munitions Storage Area:	
- 20mm Munitions Storage	600
- 30mm Munitions Storage	960
- ALS/ULS Storage (Loaded Carts)	900
- Practice Storage (Built-Up BDUs)	620
- Combined Storage (1.3 & 1.4 Munitions)	600
- WRM Munitions (Grenades, Flares, Mines, etc.) (notes 5, 6)	900
- Trailer Storage Area (note 7)	4,000
- Missile Training Covered Storage:	1,000
- RAMS Area (100' x 100' pad): Covered preferred	10,000

NOTES:

1. Add a second Missile/Bomb Maintenance bay of 1,240 SF if unit is tasked with LGBs or Maverick Missile (TGM-65).
2. Missile maintenance bays are sized large enough for checkout and assembly of 2 different missile types in each bay (2 checkout lines) and includes a 40 SF for Rocket Motor Test Cell in each bay (missile types include AIM 7, AIM 9, or AMRAAM). Simultaneous checkout of 2 live missiles in the same bay is not permitted.
3. 2.75 rocket and LUU-2 flare tasked units require an additional 400 sq ft build-up area.
4. Units with only a chaff/flare commitment require a 900 sq ft maintenance/inspection bay in addition to combined/WRM storage space listed in the chart.

5. Add 1,500 SF (30'x50') if unit has a requirement for storage of WRM Live Missiles/All Up Rounds (AUR).
6. WRM munitions requires a multicube with at least 8 small bays to house different compatibility and user groups.
7. Trailer storage areas should be covered in cold climate areas.
8. Frequently these are separate buildings. Add 20% overhead to each building.

Table 8.8. Munitions Acronyms.

Munitions Acronyms			
ALS	Ammunition Loading System	EOD	Explosive Ordinance Disposal
AUR	All-Up-Round	LGB	Laser Guided Bomb
BDU	Bomb Dummy Unit	ULS	Universal Loading System
WRM	War Ready Material		

8.10. Basic Item 217-712, Avionics Shop. This shop is used to perform maintenance on aircraft equipment and accessories such as airborne communications, cameras, bombing, navigation and fire control systems. The facility includes shop space, classroom, office, parts/tool storage, restrooms and locker room space. Electronic countermeasures (ECM) maintenance and storage may be added to this facility. See category code 217-713, ECM POD/STORAGE. Additional space may be authorized for special requirements unique to that mission. The following space requirements apply:

Table 8.9. Avionics Shop.

AIRCRAFT	SCOPE (SF)
F-16	7,700
A-10	5,300
C-130E/H (See note below table)	4,480
HC-130/MC-130	10,850
HC-130/HH-3(H-60)(ARS) See Note below table	4,480
KC-135	3,780
C-17	4,300
C-141	5,600
C-5	6,400

NOTE: Provide an additional 1,000 square feet secure room for C-130 aircraft and 400 square feet for H-60 Helicopters Equipped with Defensive Systems.

8.11. Basic Item 217-713, Electronic Countermeasures (ECM) Pod Shop/Storage Facility: This facility supports ECM activities of specific fighter and special operations units such as A-10, F-16 and others. The facility contains maintenance/testing space for ECM pods and radar warning receivers, storage space for pods, receivers and other needs, and administrative space. The function can be added to category code 217-712, Avionics Shop.

- 8.11.1. **ECM/LANTIRN/LANA Pod Maintenance Shop/Storage Facility.** The facility supports low altitude night attack (LANA) pod requirements of specific fighter units such as F-16. The facility

contains maintenance and storage for LANA pods and associated equipment. The function can be added to category code 217-712, Avionics Shop. Required areas are shown in [Table 8.10](#).

Table 8.10. Pod Maintenance Shop/Storage Facility.

AIRCRAFT	SCOPE (SF)
A-10	6,700
F-16C/D (LANTIRN included)	8,700
C-17	500
HAC-130/MC-130	8,700
H-60	400

8.12. Basic Item 218-712, Aerospace Ground Equipment (AGE). This facility supports inspection, maintenance, repair, and servicing of all assigned aircraft support equipment (SE). Units supporting up to 75 pieces of AGE are authorized a total of 5,360 square feet (gross) for all maintenance bays, tool crib, storage, battery shop, administrative, and training space. Exterior paved parking sufficient for all assigned AGE should be provided. A dedicated AGE fuel service facility may also be provided. [Table 8.11](#) shows proposed space allocation for the AGE function.

Table 8.11. Aerospace Ground Equipment Facility.

DESCRIPTION	SCOPE (SF)
Maintenance Bays	2,500
Tool Crib	200
Parts Cleaning Room	200
Battery Room	100
Parts/Storage	400
Administration	200
Cams/Computer	100
Classroom/break Area	300
Communications/electrical	120
Subtotal (net)	4,120
Overhead (30%)	1,240
TOTAL (gross)	5,360
EXTERIOR STORAGE	
Storage/Paved Parking	2,250
Fuel Servicing/Tanks	750

1. Units maintaining 76-120 pieces of powered AGE are authorized an additional 600 SF in both the maintenance shop area and the storage/paved parking area.
2. Units maintaining 121-160 pieces of powered AGE are authorized an additional 1200 SF in both the maintenance shop and the storage/paved parking area.
3. For units maintaining support equipment (non-powered AGE), add 3,200 SF paved parking area.
4. Units located at Northern Tier installations can convert up to 25% of storage/paved parking area to enclosed heated storage.

Chapter 9

CATEGORY GROUP 42, EXPLOSIVES STORAGE

9.1. Basic Item 422-256, Rocket Storage and Assembly Building. This facility provides combined assembly shops and live ammunition storage space. Requirements for AFRC units are included in 216-642 (section 8.9).

9.2. Basic Item 422-257, Segregated Magazine. This magazine is used to store small quantities of many different types of explosives and ammunition. This requirement is included in 216-642 (section 8.9).

9.3. Basic Item 422-258, Above Ground Magazine. This facility is used to store general munitions as authorized by AFR 127-100 and includes small arms ammunition without explosive projectiles, fuse lighters, distress signals, and 20mm/30mm ammunitions without explosive projectiles. This requirement is included in 216-642 (section 8.9).

9.4. Basic Item 422-264, Storage Multicube. Facility is used to store flares, rockets, smoke grenades, and small arms ammunition. Any requirement for these facilities is determined by HQ AFRC on a case-by-case basis.

Chapter 10

CATEGORY GROUP 44 & 45 STORAGE FACILITIES - COVERED/OPEN, AND SPECIAL PURPOSE

10.1. Basic Item 442-257, Base Hazardous Storage/Hydrazine Storage and Servicing Facility:

10.1.1. **Base Hazardous Storage (Pharmacy Program).** This provides for the centralized storage and dispensing of paints, oil, dope, chemicals, bottled gases, and other hazardous materials as required at each host base. May be constructed as a separate facility or identified as a separate area within the base general warehouse. This function is authorized 300 square feet for administrative, computer and customer service space and a total of 2,500 square feet for hazardous material storage.

10.1.2. **Hydrazine Storage and Servicing Facility.** For F-16 equipped units, provides space for servicing and storage of hydrazine fuel containers. HQ AFRC determines on a case-by-case basis whether to provide a full service facility or storage only.

10.2. **Basic Item 442-258, Liquid Oxygen/Nitrogen Storage (LOX/LIN).** A pad, cover, fencing and road access to provide protected storage are authorized for this equipment. Use AFH 32-1084 criteria.

10.3. Basic Item 442-758, Base Supply and Equipment Warehouse:

10.3.1. **Warehouse Space.** Warehouse space is required for bulk and bin storage of materials. This facility includes space for aisles, receiving, shipping, packing, crating, equipment storage and issue, central mobility weapons storage, general supply and base issue/supply point, personnel clothing and equipment, latrines, utility room, administration, equipment management, and transportation management. Due to the various taskings of AFRC units, use scope in this section for planning purposes only. Design actual requirements on a case-by-case basis in coordination with HQ AFRC.

10.3.1.1. **Administrative Space.** Multiply number of personnel assigned to the base supply warehouse administrative staff by 85 square feet to determine net administrative facility space authorization. Add 30% facility overhead to determine gross facility space authorization..

10.3.1.2. **Basic Supply Storage.** Multiply base population of any given UTA weekend (not total assigned personnel) by 15 square feet to determine basic supply storage requirement.

10.3.1.3. **Aircraft Parts Storage Space.** Multiply number of assigned aircraft (PAA) by the factors shown to determine net storage space required for aircraft parts storage. Add 20% facility overhead to determine gross facility space authorization.

Table 10.1. Aircraft Parts Storage.

WEAPON SYSTEM	SCOPE (SF) PER PAA
Fighter	500
Tactical Airlift/Tanker	700
Strategic Airlift	1,200

10.3.1.4. **Mobility Bag Storage.** Storage space for mobility bags shall be calculated per base requirements, at 6 square feet per authorized mobility position. Determine space for other deployable mobility equipment on a case-by-case basis. **NOTE:** Mobility bags may be stored in central

warehouse facilities or in unit/squadron facilities as determined by local commanders. Do not duplicate space authorizations for mobility equipment storage.

10.3.2. Warehouse Space at Tenant Locations. At tenant locations operation of the central base warehouse is a host function unless otherwise documented in the host-tenant support agreement. Dedicated storage space for AFRC parts and Mobility Bags should be established using the above criteria. AFRC units at tenant locations have the following additional requirements:

10.3.2.1. Readiness Spares Package (RSP):

Table 10.2. Readiness Spares Package.

WEAPON SYSTEM	SCOPE (SF)
Fighter	3,500
Tactical Airlift/Tanker	2,000
Strategic Airlift - note 1 below	3,500

10.3.2.2. In addition to RSP storage, an additional 3,500 square feet is required for mobility equipment storage.

10.4. Equipment Storage for Services:

Table 10.3. Homestation Training.

HOME STATION TRAINING (HST)	SCOPE (SF)
R-A Services Lead	100
R-B Services Follow	200
R-2 Services Augmentation	200
R-3 Services Lead Management	150
R-4 Services Management Augmentation	150
R-5 Services Management Augmentation	150
R-6 Services Lead Mass Fatality	50
R-7 Services Augmentation Mass Fatality	50
R-9 Services NAFI/Admin/Supply	150
R-Z Services In-Place UTC (Mortuary)	150
R-H Services Staff Management Augmentation	0

Table 10.4. UTC Team Kits.

UTC TEAM KIT STORAGE	SCOPE (SF)
R-A Services Lead	75
R-B Services Follow	75
R-2 Services Augmentation	120
R-3 Services Lead Management	50
R-4 Services Management Augmentation	50
R-5 Services Management Augmentation	50
R-6 Services Lead Mass Fatality	100
R-7 Services Augmentation Mass Fatality	100

UTC TEAM KIT STORAGE	SCOPE (SF)
R-9 Services NAFI/Admin/Supply	50
R-Z Services In-Place UTC (Mortuary)	0
R-H Services Staff Management Augmentation	50

NOTE: Outside storage required for Mobile Kitchen Trailer (MKT), minimum of 200 square feet; fuel storage, minimum of 50 square feet (at least 50 ft from buildings); and MKT Supplies, 150 square feet. Additional storage required (5 square feet per person) for Mobility A-Bags and Mobility C-Bags, unless storage provided by Supply.

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